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# INTEGRATING REFLECTION AND ANNOTATION INTO A WRITING TASK FOR SCIENCE STUDENTS

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**SUBTHEME:** Assessment

## PROBLEM

Artificial intelligence (including large language models like ChatGPT) poses many significant challenges for assessment; most notably ensuring academic integrity. This challenge is amplified in a large cohort subject delivered wholly online and asynchronously (Level 2 Science elective, >850 students). In this subject, students apply their knowledge about effective science communication to write an engaging blog post about a scientific topic of their choice. This traditional assessment approach posed an academic integrity risk.

## PLAN

I planned to modify the assessment so that students addressed the key learning outcomes in multiple ways. Students would not only produce an artefact that demonstrated their science communication skills but also reflected on their approach to the assessment. Reflective practice is increasingly being used in higher education to encourage student metacognition and improve learning (Silver 2023).

## ACTION

An updated version of the assessment was implemented. Students were provided with seven scientific reports from a range of disciplines generated using ChatGPT. The writing style of these reports was academic, formal in tone and pitched to an expert audience. The students' assessment task had three elements: firstly, rewriting the report as a blog post; secondly, annotating their blog post using comments to highlight and explain the elements that made their writing suitable as a blog post; thirdly, reflecting on how they had approached the task by justifying how elements of their writing differed from the original to make it suitable for a blog post.

## REFLECTION

Student perceptions of the intervention were mixed. Some students reported that they found the multiple components of the assessment confusing. The assessors reported that marking the multiple parts was time consuming, however, by including the reflection and annotation students more clearly showed they understood effective science communication. In future iterations the task brief and assessment instructions will be improved for clarity and will be more obviously linked to the rubric.

## REFERENCES

Silver, N. (2023). Reflective pedagogies and the metacognitive turn in college teaching. In N. Silver, M. Kaplan D. LaVaquer-Manty & D. Meizlish (Eds.), *Using reflection and metacognition to improve student learning: Across the disciplines, across the academy* (pp. 1-17). New York: Taylor & Francis.

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